

*Town of*



# AMHERST *Massachusetts*

Office of the Town Manager  
Town Hall  
4 Boltwood Avenue  
Amherst, MA 01002

John P. Musante, Town Manager  
Phone: (413) 259-3002  
Fax: (413)-259-2405  
Email: [townmanager@amherstma.gov](mailto:townmanager@amherstma.gov)

## AMHERST SOLAR PROJECT FREQUENTLY ASKED QUESTIONS May 2011

### **What is this project?**

The Town of Amherst has the opportunity to create a large solar array on the old landfill site, and it has the potential to generate up to 4.75 megawatts (MW) of electricity at that location.

### **Why are we pursuing this renewable energy project?**

- The amount of solar power the Town would generate would reduce our reliance on fossil fuels – the clean energy produced by the largest possible solar array on that site would be equivalent to planting 150,000 trees or taking 15,000 cars off the road;
- If our community is serious about green energy and reducing reliance on fossil fuels, we need to take real steps to make that happen;
- The electricity cost-savings to the Town, property tax payments, and lease payments for use of the facility will be very significant – projected to be about \$25 million dollars over 30 years;

### **Where would it be located, and how was the site chosen?**

The old landfill is the prime spot, due to its size, being flat with good southern exposure, and being well-located for hook-up to the electrical network.

### **Why not put solar on buildings or pursue other alternative power options instead?**

The old landfill site is the biggest potential Town-owned site in town. We are also analyzing other sites as well as we look to increase Amherst's investment in green energy. Amherst is not an optimal location for large-scale wind energy, but small-scale wind could be an option in some locations as well. We are pursuing many options in many locations, and encourage all suggestions and ideas.

### **Is the old landfill safe?**

The capped landfill has been closely monitored by the Department of Environmental Protection for many years, and has consistently been found to be safe. The landfill and the Town's drinking water well fields are ringed with monitoring wells that the Town and the DEP have continuously monitored for over twenty years. The Town is obligated to maintain the old landfill in a safe

manner, compliant with all environmental regulations, for legal reasons, and most importantly, for the health of our residents and the environment. This is true with or without solar plans. *If any problem with the landfill cap is confirmed, it must be fixed and will be fixed. If during the DEP permitting process the solar project were found to represent a risk to the safety of the cap, it would not proceed. If there are impacts to the cap or if the solar array otherwise affects the institutional controls associated with the landfill closure permit, the Town's contract with the developer will hold the developer responsible for any damages.*

#### **Why does the Town need to re-grade portions of the existing landfill cap?**

A landfill cap consists of several layers and each layer contributes to the overall effectiveness of the cap. The top layer supports the growth of grass that stabilizes the cap from erosion and provides for positive drainage of storm water off the cap. The existing depressions on the cap need to be repaired to restore positive drainage. This requirement has nothing to do with the solar project. The Department of Environmental Protection has reviewed the re-grading plan and granted all of the necessary environmental permits to the Town to proceed.

#### **How large will the facility be?**

The BlueWave proposal is for a 4.75MW facility, which represents the expected maximum capacity for solar panels on the old landfill site and would cover approximately ½ of the 50 acres of land at the landfill. BlueWave and Town officials will work with neighborhood residents to refine the design and attempt to mitigate any remaining concerns in order to determine the most appropriately-sized solar array for that location. Depending on the spacing of the panels, the slope of the land and other construction issues, each 1 MW of capacity uses around 5 acres of land. The green shaded areas on the attached site map depict the maximum possible usable area for a solar array. The actual proposal forthcoming from BlueWave will cover a smaller area of the site.

#### **What is involved in approving this project?**

It will require many steps to make this happen.

1. **Town Meeting** approval is needed to authorize the Town Manager to enter into contracts longer than three years. This project involves multiple contracts: the Power Purchase Agreement (PPA) is the primary contract, establishing the financial and other terms of the transaction and the expectations of, and protections to, both parties. Other related contracts include the Site Lease contract which will provide BlueWave with the right to locate panels on this site over the 25-30 year life of the contract. BlueWave will also need to receive WMECO's approval of an interconnection application before proceeding.
  - a. **Why give approval to sign the Power Purchase Agreement before we know the details?** Because the contract is still being negotiated – the details can't be public until it is signed, and it can't be signed until Town Meeting authorizes the maximum term. BlueWave and its partners will incur significant expense during the PPA process including completing final design and engineering plans; developing permit and interconnection applications; identifying, assessing, and preparing preliminary plans for other potential sites; and working with the Town to develop an acceptable Power Purchase Agreement. It is appropriate that they undertake this activity knowing they are negotiating in good faith with the Town.



- b. **How do we know we aren't authorizing a bad contract? Will anyone give feedback on the contract before it is signed?** Negotiating contracts is the Town Manager's responsibility; it is his charge under the Amherst Town Government Act. The Town Manager is consulting with legal and financial experts familiar with solar projects and will review the contract with the Select Board in Executive Session prior to signing.
2. **Zoning Board of Appeals** approval of a Special Permit is necessary in order to put a solar array on the old landfill, which is in the Professional Research Park district. The Town and BlueWave will have to demonstrate that the plan meets the requirements of section 10.38 of the Zoning Bylaw. Additionally, approval of the Special Permit would be contingent on obtaining the necessary permits from the Massachusetts Department of Environmental Protection and an interconnection agreement with WMECO.
- a. **Can people submit their concerns in regard to these permits?** Absolutely! The ZBA will hold a public hearing on this permit application, and the public will be able to express thoughts and opinions live or in writing. BlueWave has also agreed to present monthly updates to the community and to share permit applications, engineering and design work and other relevant documents with the community and be available to answer questions and entertain input prior to beginning the formal ZBA, DEP and other regulatory processes.
3. **Department of Environmental Protection** is the State's permitting authority for this project. Capped landfills and their re-use are heavily regulated and monitored by the Department of Environmental Protection in order to ensure that they pose no risk to people or the environment. The Department of Environmental Protection will also conduct a comprehensive public review process and interested parties will also have an opportunity to submit written comment. Blue Wave will have to submit a "Post Closure Reuse Plan" to DEP. This plan will include a description of the project and information on how the project will interact with the old landfill. The plan should include:
- Geotechnical Data on Stability and Settling
  - Specifics on the interface of the project with the cap
  - A qualitative Health and Environmental Risk Assessment of the project
  - Construction storm water management plan

The plan will also address any changes to any of the existing closure plans:

- Approved post closure use plan
- Stormwater control plan
- Landfill gas monitoring / control plan
- Post closure monitoring plan and maintenance plan

**How will the Town be protected against the risk of BlueWave and its project partners going out of business?**

The contract between BlueWave and the Town will require a financial assurance mechanism to fully mitigate against such a risk. Additionally, the Massachusetts Department of Environmental Protection requires financial assurance mechanisms as part of BlueWave's permit in order to insure proper care and maintenance of the landfill cap throughout the duration of the project;

these will be conditions of DEP's permit approval. For more detail on risk management, see page 41 of BlueWave's proposal on the Town web site.

### **What is the project's timeline?**

Project permitting and interconnection approval with WMECO will take a minimum of 6-9 months. Once all permits are obtained and an interconnection agreement has been completed, the project will begin installation. The earliest that this project would begin producing power would be during the third quarter of 2012.

### **If BlueWave bears all the cost, how can they make a profit?**

The combination of various State and Federal tax credits, accelerated depreciation, and production based incentives for solar projects within the Commonwealth makes it possible for the project to sell energy to the Town at a significant discount to the Town while still generating an appropriate rate of return for the project's investors. You can find out more about the various Federal and State tax incentives at: <http://dsireusa.org/>

The solar project will generate both electricity and Solar Renewable Energy Certificates (SRECs). The electricity will be sold to the Town for a pre-determined price per kWh that will be specified in the Power Purchase Agreement for a predetermined period of time. The SRECs will be sold to an investor that is required to purchase these certificates in the marketplace based on regulations set forth by the Massachusetts Renewable Portfolio Standard and its Solar Carve Out. You can find out more at:

<http://www.mass.gov/?pageID=eoeesubtopic&L=3&L0=Home&L1=Energy%2c+Utilities+%26+Clean+Technologies&L2=Renewable+Energy&sid=Eoeea>

### **How was BlueWave chosen?**

The Town issued a Request for Proposals for solar projects on the old landfill, and received six responses. BlueWave's proposal was unanimously selected by a committee made up of Town staff, alternative energy experts from the Town's Energy Task Force, and representatives from the Town's Recycling and Refuse Management Committee and the Leisure Services and Supplemental Education Commission. BlueWave is deeply experienced in renewable energy and is successfully developing solar energy projects on behalf of several Massachusetts communities including New Bedford, Taunton, North Adams, and Athol. The BlueWave team includes strong financial partners, an internationally recognized solar design and installation engineering company, and a deeply experienced landfill permitting contractor. A key consideration: Blue Wave is headed up by an environmentalist, not a Wall Street financier: John DeVillars is the former New England Administrator of the United States Environmental Protection Agency and former Massachusetts Secretary of Environmental Affairs. He understands the critical issues of climate change, the need for financial incentives to encourage systemic change, and brings a high standard of environmental excellence to this and other projects BlueWave is undertaking elsewhere.



**What are the financial benefits to Amherst?**

- We will pay a stable and significantly reduced rate for the Town's electricity – and in an era of rapidly increasing utility costs, this is huge – for its savings and for the ability to accurately predict and budget for these costs. Initial average cost-savings over 25 years is predicted to be around \$25 million, but that would be for the largest possible solar array; our savings will likely be less as we seek the most appropriately sized array for the location. We believe there is the opportunity to achieve further savings on other municipal properties and are currently reviewing that potential.
- We will receive personal property tax payments on the equipment. Initial projections suggest tax revenue of more than \$5 million over the 30-year contract for the largest possible solar array; our tax payments are tied to the size of the system and will be less if we downsize the system.
- This would be a significant economic development project, broadening our tax base and helping to address our structural deficit in a clean, progressive and extremely low-impact manner.

**What are the contracts' financial terms?**

The contract terms are still being negotiated and the size and siting of the array are still in the early stages. We will work to balance the price we will pay for with electricity from the solar arrays with the payments BlueWave will make to the Town to get the best overall financial deal. If the project would not result in a significant net financial benefit for Amherst, it will not move forward.

**What are the environmental benefits for Amherst?**

Initial projections are that the largest possible solar array on the old landfill would generate clean energy equal to planting over 150,000 trees or taking 15,000 cars off the road.

**What kind of ongoing maintenance will the site require?**

In addition to the regular monitoring of the capped landfill, the photovoltaic system will require once or twice per year visual inspection and maintenance of the inverters at the facility. Inverter maintenance is fairly simple and non-invasive. It would be performed by one technician. The periodic (2-3 times/year) mowing of grass will be required.

**Will you be able to access the landfill cap for maintenance, if necessary, once solar panels are installed?**

Yes. The solar panels are designed and installed as individual modular units that can be detached and removed without affecting the rest of the solar panel system.

**Have studies been done on potential health issues of solar arrays?**

The performance, reliability and integrity of solar photovoltaic systems have been studied for over 30 years by the National Renewable Energy Lab as well as the International Energy Agency. No health effects or concerns have been identified.

**Will it make noise?**

There is very little sound emanating from the equipment installed on the site. The panels and racking are silent. Inverters only make noise when the system is in operation, which will always be during daylight hours. Noise levels are estimated to be less than 30-40dB at neighboring property lines if inverter pads are located ~300 feet from their land (30 dB is a whisper, 40dB is a regular conversation) prior to any additional design/installation measures that can be undertaken to further reduce noise from the inverters.

**Will any trees or vegetation be removed?**

No trees or vegetation will be removed. The only removal of vegetation will be mowing of the grass at the facility 2-3 times/year. It is likely that trees, shrubbery and other plantings will be a part of the plan to reduce any impact of the facility on the neighbors.

**Will goats or sheep be used to maintain the grass?**

No.

**Will there be security lights around the landfill?**

No, there is no lighting required for the facility.

**Will the public still have access to the Robert Frost Trail?**

Yes, the trail will remain outside the boundaries of the solar site.

**Can my family still enjoy winter sledding at the hill near Wildflower Drive?**

Yes.

**How can I find more information?**

The DPW Project page on the Town website contains lots of information. Go to the DPW page and choose DPW Projects, then choose Old Landfill Project 2010, or go directly to:

<http://amherstma.gov/index.aspx?NID=1394>

Among the information there:

- BlueWave's proposal (This is not the contract, but the initial proposal. The contract will refine and clarify the proposal details.)
- The PowerPoint presentation from the April 6<sup>th</sup> community meeting
- The landfill's comprehensive site assessment reports
- And more. New information will be added as available.



# Phase 1: 4.75 MW Proposed Facility





